A REPORT ON THE BIRDS OF NORTHWESTERN ALASKA AND REGIONS ADJACENT TO BERING STRAIT. PART V

WITH THREE PHOTOS

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HARLEQUIN DUCK. ***Histrionicus histrionicus pacificus.***

These birds were recorded on but two occasions during 1921, once on St. Lawrence Island on June 28, when three birds were seen, and once in Providence Bay, Siberia, when seven birds swung so close I dropped a male. The first Harlequins noted at Cape Prince of Wales were seen along the ice-foot on May 28, where they were diving for food. Several bunches were observed on this date and a number of others on June 8 and 16. The Eskimos told me these birds were never common at Wales and I could get no information as to their breeding. These beautiful birds appear to best advantage when resting in flocks upon the ice floes, particularly if the waters are quiet and the clear snow has fallen upon the broken ice fields, giving a glistening contrast to the dark shadows of the shattered fragments.

STELLER EIDER. ***Polysticta stelleri.***

A few of these ducks were seen at Emma Harbor, Siberia, during the first week in July, but it was not until we reached Whalen, near East Cape, that we saw them in any numbers. None was observed at St. Lawrence Island during the week that Hendee spent at that place. On July 11, Hendee and I went ashore and spent the day collecting at Whalen. It was one of the most disagreeable collecting days that I have ever spent. Hundreds of phalaropes and kittiwakes were about, but the northern gale blowing off the ice made extended work impossible. Very few ducks were seen, and none closely enough to identify, except the old-squaws which were constantly passing close overhead.

Whalen is built on a bar at the foot of a mountain, bounded by the Arctic Ocean in front and a large salt-water lagoon at the back, this narrow spit extending for miles until it joins the high land beyond. July 12 dawned bright and clear and at daybreak we were awakened by the popping of guns. We could see hundreds of eider over the village, with the Siberians dropping a few from every flock. Going ashore we enjoyed about as unusual collecting as one could experience, for eider ducks flew from the north, skirting the shore of the lagoon until they came to the bar, where they raised and passed above the village. It is impossible to give an estimate as to the number of birds, but there were flocks of them in sight all the time for several hours in the morning. All four species of eider were represented and the Steller in equal abundance with any.

When a flock of birds was sighted, instead of concealing themselves, the natives stood in plain sight and when the eiders were nearly overhead, they whistled and threw their bolos, which caused the birds to dive; then everyone in the near vicinity fired. At times a rain of ducks fell, often bounding high in the air when they struck a skin house. Of the birds flying, males were in the great majority, doubtless having left the females to rear the young. The natives told us that not many birds fly so late in the spring.

Dr. Nelson observed similar flights of these birds during his cruise on the *Corwin,* and remarked upon the fact that they did not become wary, probably because the natives were without firearms. Since then, however, probably for twenty years at least, the eiders have been shot as they passed daily to and from the sea, but still they continue to pass without seeming to grow more wary. The birds are still taken with bolos, as when Dr. Nelson visited the region, but it is usually the boys who handle them now, while the men use shotguns.

None of the Steller Eiders was observed until our arrival at Wainwright, when Hendee saw "rafts" of them along shore between the 7th and 11th of August, after which they were not so numerous. We noted them rather commonly all fall, however, taking considerable numbers of young birds and the females during the month of September, but they grew rare toward the end of the month. October 3, three birds were seen, and one on October 13. No males, except young, were taken in the fall months.

The first arrivals of the spring were on May 28, and a week later a number were in flight over the open leads. They were fairly common about the tundra ponds during June, but very few were nesting. One set of six eggs was secured on July 6, the nest being found on the shore of a shallow lake. It was a typical duck's nest, of dried

Fig. 55. NATIVES IN WHALING OOMIAK HUNTING EIDERS ALONG ICE FLOE.

grass lined with down. A heavy snow storm in July probably caused great damage to nesting birds, for many of the nests of different species, including one of the Steller Eider, were found deserted, and jaegers had destroyed the eggs.

At Cape Prince of Wales the first Steller Eiders were seen on May 12. At that time the Strait was still choked with the ice pack, and salt water froze in the leads. On May 18 and 19 a few birds were noted; but the big migration past this western-most point was on June 3. We had been walrus hunting in the Strait for two days and were returning when the wind suddenly died and a calm prevailed, a very unusual occurrence. Immediately, great strings of birds appeared on their northward journey, gulls, loons, ducks and geese, and among them many of this eider. The natives said "When plenty birds come from south, then bime-by—mebbe one, two hours—we ketch south wind". It was true. The birds seemed to be going just ahead of the storm from the south. I learned to foretell a change in the wind by the migration of the

birds; for invariably a large migration occurred just before a south wind. We feared such a wind, for if caught offshore we could not sail back to Wales and would be forced to drift into the Arctic. Therefore the movements of the birds were watched with interest. A few of the Steller Eiders were seen about Wales all summer, but those I collected were non-breeding birds.

In 1924 our representative at Barrow, Charles Brower, secured several sets of eggs of this species, together with the nests and brooding birds. We find there is a considerable variation in color in the different sets, the eggs varying from light brownish to blue green.

SPECTACLED EIDER. *Arctonetta fischeri.*

This species is the least common of all the eiders, but we met it at several points enroute along the coast and saw portions of the skins used as ornaments by the natives. We collected three males in changing plumage, on July 12, at Whalen, and we were told that they were not rare at that place, but that it was too late in the year to find them. The Eskimos at Point Hope had ornaments made from the "spectacles", as did those at Wales and at Teller. At Point Barrow I secured five female birds from a bunch of eiders sent to the captain by Mr. Brower, and during August and the first half of September we saw, and collected a few more, females and their full-grown young.

These birds, when accompanied by the young, are very tame, or stupid, according to your point of view, and allowed us to approach within gunshot with scarcely any effort to evade us. The last of the species noted during the season of 1921 was on September 23.

They returned in the spring of 1922 with Steller Eiders, on May 28, and Hendee secured specimens during the first three weeks in June. The natives stated that comparatively few of either the Spectacled or Pacific eiders were taken, because the shore lead was closed during the time of their greatest migration, causing them to scatter over a wide area on their northward flight. A few birds were seen throughout July and August, and although the natives said that these birds usually nest about Wainwright in small numbers, we failed to find a nest.

I first noted Spectacled Eiders at Wales on May 16, 1922, when a pair swung close to our oomiak as we were hunting bearded seals. During the rest of the month a few pairs were seen and on June 3 a number were in migration, flying before a southerly storm. Many were also seen on June 23, showing the species has an extended migration. A few birds spend the summer in the vicinity of Wales, but the natives claim that they do not nest there.

I had been informed that Point Hope was a favorite resort of this species. The natives at Whalen told me that great numbers migrate northward each spring, and Captain Joe Barnard, whose boat was frozen in the ice at a point about thirty miles south of East Cape, informed me that there were literally thousands passing for several days during the spring of 1922. Inasmuch as comparatively few were seen at Wales, I have concluded that the greater part of these fine eiders spend the winter along the eastern Siberian shore and in the spring move northward to Bering Strait, to the vicinity of East Cape, where many cut across to Point Hope. From there they migrate on up the Alaskan coast, spreading out to their favorite breeding grounds. Nelson found these birds near the Yukon, and concluded that they would soon be extinct, due to their limited breeding range, but our experience does not justify this belief, for they not only breed as far north as Barrow and to the eastward, but are fairly common at Wainwright in migration. The fact that ornithologists must winter in the Arctic, and at a favorable place (preferably at one of the "Points"), in order to secure these

handsome birds in their high plumage, has made them rare in collections. They start molting soon after reaching their breeding grounds so that a collector has but a few weeks in which to secure full-plumaged birds.

Several sets of eggs of this species were secured for us at Point Barrow during the spring of 1923 and 1924. A male in light plumage, museum no. 8633, taken at Wainwright June 9, 1922, has a black V on the throat, as in the King and Pacific eiders, except lighter.

PACIFIC EIDER. *Somateria v-nigra.*

This is the commonest species south of Bering Strait in summer, according to our limited experience, for great flocks of them were seen along the edge of the ice on our cruise from King Island to St. Lawrence Island. Hendee noted them as abundant during the first two days of July and until the ice left, when the birds also took their departure. I saw them commonly at and in the vicinity of Emma Harbor, where a good series was collected. They are wonderfully beautiful birds and seem well-adapted to their surroundings, the white of their plumage showing cream-color in the bright glare of the Arctic sun, when contrasted with the blues and greens of the shadows of the ice upon which they are wont to perch. Flocks of them may be seen along the edge of a lead where they have climbed upon the ice, sitting huddled in the sun, while seals splash about in the open water just appearing through the rotting ice. A nest, doubtless of this species, was found by Mr. Burnham on July 5. It had been broken up by some animal. The ice had just left Emma Harbor and the sterile mountains were still covered with snow, especially in the valleys. Nature has to work fast in that region to accomplish her task in the short time allotted her—a brief two months of summer.

At Whalen we saw Pacific Eiders in great numbers crossing the bar over the village where the natives easily shot them, and a flock of about fifteen, apparently composed entirely of females, was noted at St. Michael on July 20. A few flocks were seen east of Barrow while we were enroute to Demarcation Point.

These birds proved scarce near Wainwright, few being seen all fall. We took a male, a bird of the year, on September 1, and did not see the species again until October 1, when several flocks were observed offshore. For the rest of the month they were seen more or less commonly, especially near the mouth of Wainwright Inlet where they associated with flocks of King Eiders. On our trip to Barrow, mentioned previously, from October 27 to 29, we saw a great many young birds, especially around the floating ice. When we were crossing the ice on Peard Bay on October 28, we saw several large flocks of eider ducks composed entirely of this species, so close that we were able easily to identify them. Our last record for the species was made November 18, when we collected a female.

The following spring the first examples of this species were seen on their northward journey at Wainwright on May 23, and a large movement took place on May 29. Specimens were collected between June 9 and 23, flocks often alighting on the tundra ponds at this time. Eggs were found on June 30 and downy young were collected on August 5.

They were noted over an open lead at Wales on May 5, and after that time a few birds were seen on our different hunting trips. A great many were in flight on June 3, in company with the other eiders, and especially large numbers passed the Point between June 10 and 16. This species breeds more or less commonly at Wales, making its nests along the shores of Lopp Lagoon, or on small islets in the tundra ponds. Fresh eggs were obtained between July 1 and 15. The nest is usually rather well made, of dried

grass lined with down plucked from the breast of the brooding bird. Pairs of non-nesting birds were often sitting about on the drifting ice, their large size and color making them conspicuous at a considerable distance.

KING EIDER. *Somateria spectabilis.*

This species of eider is common in Arctic Alaska. We noted it sparingly at Emma Harbor, Siberia, during the first week in July. I am told that it occurs in great numbers at St. Lawrence Bay. Captain Cochran told us that the enormous numbers we saw in flight at Whalen, near East Cape on July 12, could not compare with those seen at the former place on some of his earlier trips there and at the same season. At Whalen, King Eiders were numerous during the morning flight described in the notes on the Steller Eider, most of them being in breeding plumage, although beginning the post-nuptial molt. The natives preferred to shoot these birds rather than the smaller and faster flying Steller Eiders, both because they were eisier marks and because they furnished more food. During the spring months great flocks of them pass Point Hope following along the open leads of water to their northern breeding grounds.

At Corwin coal mine, on August 3, we took three birds which were in the eclipse plumage and we noted a few while we were enroute to Barrow. The majority of the males had already departed for the south, leaving the females to attend to the domestic duties. During the southward flight, the latter part of June and July, the natives and whites of Barrow kill great numbers for winter food, the birds passing over a certain bar to the northward of the village in such numbers that hundreds can be killed in a day. The hunters conceal themselves and fire into the great flocks, killing many at each discharge.

A few flocks of eiders were seen daily on the trip to and from Demarcation Point, about the middle of August. We also found them fairly common throughout September at Wainwright where the females and young were often seen upon the inland lagoons before the freeze-up. Later, they were found on the salt water close to the beach. The first young birds which were able to fly were taken August 29. These, together with three young Spectacled Eiders, were on one of the inland ponds and allowed me to walk within gun-range without attempting to escape.

During the summer of 1920, the natives at Pinachugaruk, about thirty miles up the coast from Wainwright, found a great band of molting eiders and drove them ashore, where they killed about seven thousand. This band contained both King and Spectacled eiders, according to Allen, from whom I secured the information. Mr. Brower told me that the natives of Barrow killed two boat loads in that vicinity in a similar manner a couple of years ago.

The King Eiders were not so numerous during the month of October, many of them having moved to the southward. However, a few scattering bands could be seen almost any day of the month, as I have many notes of them during that period. During our trip to Barrow October 24 to 27, we saw them commonly along the shore where they fed about the great cakes of grounded ice, doubtless upon the shrimp which gather in the crannies of the ice. A male in high plumage was observed on the 27th. The last noted were two small flocks at Wainwright on November 9.

A native saw three King Eiders on April 15, 1922, at Wainwright, and more were seen on May 5. The first large flocks arrived on May 10, and on May 14 a large migration occurred, there being some flocks of thousands of individuals. They were common whenever the north wind stopped for a few hours. There was a continuous northeast wind for a few days, which prevented the birds from flying in numbers; but favorable weather prevailed from May 22 to 29, during which time the migration continued steadily, with great hordes massing over the openings through the ice pack.

During May Hendee reported that although many birds were killed, in no case did a mate drop from the flock to await a dead bird, but on June 2 and after that date, this was a common occurrence.

When I dropped down the coast by dog-sled, natives reported flocks offshore near Point Hope on March 21, 1922; at Wales they observed the first flock on April 6, showing that the birds work along the open leads, irrespective of weather conditions, for Point Hope is a considerable distance farther north than Wales. A few birds were seen at the latter place from April 20 on, and on May 5, they were abundant in their northern migration, great flocks following the open leads. The crews of three oomiaks took two hundred and fifty birds on this date. The birds fly in large flocks, often several hundred yards in width, and as a flock approaches, the Eskimos paddle their large skin boats directly in the path of the oncoming birds, shooting into the flock as it passes on either side. The birds show little fear and do not swerve from their course as do the fresh-water ducks. None was noted at Wales during the summer.

AMERICAN SCOTER. *Oidemia americana.*

These birds were not common in Bering Strait, a few individuals only being noted with the King Eiders on May 8. Several small bands were seen May 17 and a male was taken May 19.

DIXON WHITE-WINGED SCOTER. *Oidemia deglandi dixoni.*

We did not observe this species in the Arctic, but Brooks reports a few specimens from the vicinity of Demarcation Point; so they must round Barrow, unless making a long overland flight. Hendee reports the species as having been common at Unalaska during the latter part of September, 1922.

SURF SCOTER. *Oidemia perspicillata.*

Hendee obtained a male of this species at Wainwright on June 26, a northern record for the species. The natives had never observed one, so the individual taken must have been a straggler.

SNOW GOOSE. *Chen hyperboreus hyperboreus.*

We arrived too late in the season of 1921 to see many of these birds, the most of them being taken during the spring migration of 1922. Considerable numbers are killed by the natives in the vicinity of Barrow, as is attested by those we saw in the ice-cellars. Two birds were noted September 6 at Mil'katavik, near Wainwright.

Snow Geese arrived at Wales in large bands on May 31, 1922, while the tundra was still in its winter coat of snow. The migration continued June 1 and 2, and there were a few straggling flocks after that date. They followed along the coast, rounded Cape Prince of Wales, and cut to the northward, working along the high land. One or two bands occasionally alighted at a tundra pond. They were beautiful in flight, their white plumage being contrasted with their black primaries, as they circled against the blue of the Arctic sky. The snow-covered tundra was splotched with small, rainbow-colored ponds, and from far and near came the quavering, echoing calls of these geese, and the guttural cries of the Little Brown Cranes. Captain Joe Bernard told me that he saw hundreds of white geese crossing Bering Strait at that time, about thirty miles below East Cape, where they presumably spread out to their breeding grounds along the Siberian coast. Hendee reported the Snow Goose as rare at Wainwright; one specimen was taken June 12, and a flock observed June 26. We also saw a flock of twenty at St. Michael on September 1.

WHITE-FRONTED GOOSE. *Anser albifrons gambeli.*

Our only records for these birds in 1921 were made at Wainwright on August 22, when a flock of four was seen, and on August 25, when a dozen more were noted. Both flocks were feeding on the tundra.

Hendee took his first specimen the following spring on May 27, and they were observed plentifully after that date. A few pairs nested in the vicinity of Wainwright and two sets of eggs were secured, the first on July 12 and the second on July 25, both sets being of but three eggs. It seems evident that this species migrates overland across Seward Peninsula, instead of following the coast to their breeding grounds, for none was observed at Wales, westernmost Alaska.

White-fronted Geese breed rather abundantly along the large lakes inland from Point Barrow, and several sets of eggs with the nests and brooding birds were collected for us by our representatives in 1923 and 1924. There were from three to six eggs in the sets. These nests were of grass lined with down.

CACKLING GOOSE. ***Branta canadensis minima.***

Three specimens, the only ones noted, were taken by Hendee at Wainwright on July 5, and these birds were the only representatives of the "Canada Goose" group which we observed, although the natives told me that they are common along the Serpentine and Lane rivers on the north side of the Seward Peninsula. Our record of Cackling Geese at Wainwright places this form far into the range of so-called *hutchinsi*. Had the larger specimen been taken alone, it might have been designated as *hutchinsi* (although it is almost uniformly dark above and below as a good *minima* should be), for the measurements agree more or less with those given for the larger form. The smaller birds agree with *minima* in measurements and are lighter-colored below, as the *hutchinsi* should be. The large dark-colored bird is a male, while the two smaller, lighter-colored ones are females. Below are the measurements in millimeters for the three specimens.

No. 8091 Male: Culmen 31; wing 406; tarsus 76; tail 128
No. 8090 Female: Culmen 29; wing 364; tarsus 63; tail 120
No. 8089 Female: Culmen 31; wing 360; tarsus 65; tail 123

BRANT. ***Branta bernicla.***

The brant is included in our list on the strength of one specimen, a female, collected at Icy Cape, September 11, 1921; museum no. 8216. It appears to belong to the typical eastern form, with light belly and underparts strongly contrasted with the dark breast. The white of the neck is confined to a patch on each side of the neck, while the back is lighter than in the Black Brant. It is probable that the nesting grounds of *bernicla* and *nigricans* meet to the eastward of Barrow, with a few individuals of *bernicla* ranging down the northwest coast.

BLACK BRANT. ***Branta nigricans.***

From the 20th of August until the last of that month, we saw a good many flocks of this species daily, all migrating well offshore on their southward journey. A few birds were taken in the vicinity of Wainwright the 1st and 2nd of September, but the majority of the migrating flocks kept well offshore. The natives of Barrow go to the lagoons near Peard Bay and shoot numbers of these birds, where they have a passage route to their feeding grounds. A similar feeding ground is located along the shores of the great lagoon near Icy Cape, some fifty miles to the south of Wainwright. Hendee and I accompanied Allen and a crew of natives in a whale boat, leaving Wainwright September 6, enroute for the cape. It was a blustery day with a head wind, but great strings of Brant were continually passing us, all flying low over the water. Bad weather prevented our making a trip to the feeding grounds, where this migrating horde stopped to feed before continuing south, until the tenth of the month; but, upon finally gaining our goal, our efforts were well repaid.

The lagoon is quite broad and shallow at its northern end, with banks of broken tundra some five to eight feet high along the lagoon proper, but considerably higher where arms extend into the mouths of some of the tundra rivers. Kelp, or seaweed,

is thrown upon the beach by the waves and the Brant congregate in such localities to feed. As we approached the northern end of the lagoon, we enjoyed a calm, and the low tundra shores seemed but blurred shadows on the horizon. Then the sun, filtering through a mantle of clouds, threw soft reflections upon the water, so that the whole bay looked more like a broad expanse of Louisiana lagoons than a bay gleaming under an Arctic sun.

The roar of black powder could be heard from ahead, and as each report came, muffled by distance, we saw great strings of birds rise in wavering lines, so dense and black that they looked like swarms of flies. The natives told us there were not many brant flying the past few days, but each family had several hundred birds tied out on racks, so that they must have had fair success.

Fig. 56. NATIVE CAMP WITH RACK OF BLACK BRANT; ICY CAPE, SEPTEMBER, 1921.

The Eskimos hunt by building blinds of turf in a favorable feeding spot, remaining hidden until a great band is massed sufficiently to make a real killing with a single shot. One of the boys of our party killed seventeen with two shots. The natives kill for food and cannot be blamed for being economical with their ammunition. Even a bird lover, after seeing the primitive way the Eskimos live, cannot censure them for shooting such numbers for food. I desired a good series of both adults and young birds, so took my choice of the kill. We were told to await a north wind if we really desired to see the brant in great numbers, but the lateness of the season made it necessary for us to return. When out one day, the wind suddenly shifted to the north and we then understood what the natives meant by "arra lik-lik" (plenty brant). The change in wind brought us a flurry of snow and lowering clouds, the chill wind making boating a disagreeable pastime. We encamped that night on an exposed gravel bar and scarcely had we started to make camp when the evening flight of brant commenced, our first

inkling being the faint "lik-lik" of the approaching birds, flying low and sweeping so close to the ground as they passed that one flock brushed our tent. We heard them flying late at night, and next morning, when the sun threw a faint light through the grim clouds, great flocks of brant hurried southward, now high in the air, as though sure of their landmarks. They looked black against the Arctic sky and made haste, as if to keep ahead of the scurrying clouds. The last brant of the season were taken at Wainwright on September 27, when we collected two young birds.

Hendee saw his first spring birds on May 24, and a few more were seen on May 29. On June 30, he saw large flocks flying south, in a fog close along the beach. Of the dozen specimens he collected none appear to have been breeding, but large flocks were seen all summer. The first of the fall migration began on August 15, when several large bands were seen flying southward out over the ocean.

The first Black Brant I saw at Cape Prince of Wales were in migration May 28, four days later than Hendee observed them at Wainwright. Grinnell (Birds of the Kotzebue Sound Region) reports them migrating past his winter camp on the Kowak on May 31, 1899, flying northeast. The fact that few birds were observed passing the cape leads me to believe that the Black Brant migrates overland across Seward Peninsula and on up the coast, rather than following along the shore the entire distance. A few bands were seen on June 3, but after that date none was observed in migration. A few individuals were noted near Wales in July, which were probably mere stragglers, as those collected proved to be non-breeding.

This species nests along the inland lakes back of Wainwright and Barrow, but we did not secure any eggs. Several sets, with the brooding birds, were collected for us about twenty miles inland from Barrow during the springs of 1923-24. The nests were of grass lined with down.

EMPEROR GOOSE. ***Philacte canagica.***

At St. Lawrence Island Hendee observed the Emperor Goose daily the first week in July. He was working the north shore, which, according to the natives, is not a good locality for this species, the lagoons along the southern side being the main breeding ground. Some of the birds fed upon the tundra near Sivunga, where he obtained the one specimen he collected, a breeding female. The most of the birds which he observed were in flight, offshore. I saw seven birds near Kookuluk on June 28, and five the next day near Gambel Village.

This species is not rare at Cape Prince of Wales, and its range in that direction seems to be more extensive than has been previously reported. Rev. Thomas of Point Hope assures me that they are occasionally taken at that place; he recorded four birds on July 28, 1921, a few days previous to our visit. Mr. Dupertius, of the Bureau of Education, told me of seeing a specimen in an ice-cellar at Point Lay, 150 miles above Point Hope, in the spring of 1920. Dupertius spent two years at St. Lawrence Island and is thoroughly familiar with the species. St. Lawrence Island has been considered the center of abundance of the Emperor Goose, but from my experience I believe the southern shore of Kotzebue Sound to be their favorite breeding ground. The Eskimos reported the mouths of the Serpentine and Lane rivers as being a great breeding place, and I found the birds more or less abundant about Wales. They are strictly maritime, rearing their young along the salt-water lagoons and the tundra ponds adjacent to the coast. The first arrivals appeared at Wales on May 19, when two birds were seen; several were noted May 29, and after that date they were seen more or less frequently. As we returned from our hunting trips out in Bering Strait, we often found them in flocks resting upon the floating ice-cakes, or along the ragged, broken edges of the ice-foot.

Emperor Geese breed quite commonly along the shore of Lopp Lagoon; I secured my first set of eggs there on June 22. Nelson gives the first of June for the beginning of the nesting season at the mouth of the Yukon. The birds in the vicinity of Cape Prince of Wales averaged about two weeks later in nesting than the birds along the southern shore of Bering Sea. The nesting sites were usually along the shores of small ponds; the nests consisted of dried grass, well lined with down. When alarmed, the old bird flushes from the nest without taking the precaution of covering her eggs, but usually the eggs will be well concealed when the brooding bird leaves.

During the daytime, flocks of fifty or more often congregate, flying low along the shores of Lopp Lagoon, or feeding on the wide-stretching bars at the mouths of the various salt-water "rivers". When I took toll from these flocks, I invariably found I had a specimen with the breast partially picked, which seems to indicate that the birds off duty flocked together, with both sexes sharing in the incubation. We collected a good series of the eggs, the sets varying from three to eight eggs each. Nagozruk reported the Emperor Goose having young by the middle of July, during the summer of 1923, in the same region we worked together the previous season.

The Emperor Goose is not wild as I several times crawled within gun range of birds before they took wing. Their mating seems to be carried on in a quiet manner, a pair usually being seen feeding on the tundra, or resting quietly on a hummock, soon after their arrival. Nelson states that the male birds are pugnacious during the mating season, so it is probable those nesting near Wales were already mated at the time of their first appearance (although they migrate in flocks), for no particular courtship antics were noted.

WHISTLING SWAN. ***Cygnus columbianus.***

Only one of these birds was observed in life during 1921, a single individual in flight over Cape Prince of Wales on July 30. A native killed one of a pair of birds near Wainwright Inlet August 26. The Eskimos say these birds are rare in the vicinity of Wainwright, although the herders occasionally find nesting birds.

Whistling Swans are not abundant in any given locality in Alaska, even in migration, but they have an extensive breeding range, from the mouth of the Yukon to the eastward of Point Barrow. Mr. Dupertius, of the Bureau of Education, showed me a photograph which he made of four downy young swans in their nest on St. Lawrence Island during the summer of 1922. He tells me the species breeds there regularly.

At Wales I saw swans rarely. The first was noted on June 5, when I witnessed as pleasing a performance as it has ever been my privilege to see. The tundra was still clothed in its winter coat of white, although pools of brilliant colors had formed here and there from the melting snow. It was in the height of the spring migration, with hundreds of Snow Geese, Little Brown Cranes and shore-birds in sight continually. Then, far out on the tundra, I heard a different note, a clamoring, quavering call, first full and loud, then gradually dying down. With the aid of the glasses I made out three swans, possibly two males performing for the benefit of a female. They walked about with arched necks proudly lifted, taking high steps with wings outstretched, two birds occasionally bowing to each other, and as they performed they kept continually calling. After a few moments in a given place, they took to wing and drifted across the tundra a hundred yards where the ceremony was repeated.

I saw only a few swans after June 5. While collecting near Mint River, which empties into Lopp Lagoon about twenty miles north of Cape Prince of Wales, I found a nest of this species with three downy young. It was early in the morning that we discovered it, on July 12. Both adults were seen sitting close to the edge of a pond and, as we approached, they flew majestically away, only to circle and sail back, directly

over our heads. The female was more stained than the male. There, near the water's edge, from where the parent birds had taken flight, were three beautiful, little, downy young which had just left the nest (some twenty-five feet away), doubtless ready to undertake their first swim. They were as fluffy as balls of yarn, with dark brown eyes, and bill and feet of flesh pink. They showed no fear and cuddled contentedly when we held them in our hands. The nest was a conspicuous, built-up mound of moss on a ridge overlooking the little lagoon, and was unlined with down. From the size of the young, it was evident that the swans made their nest on the first bit of bare

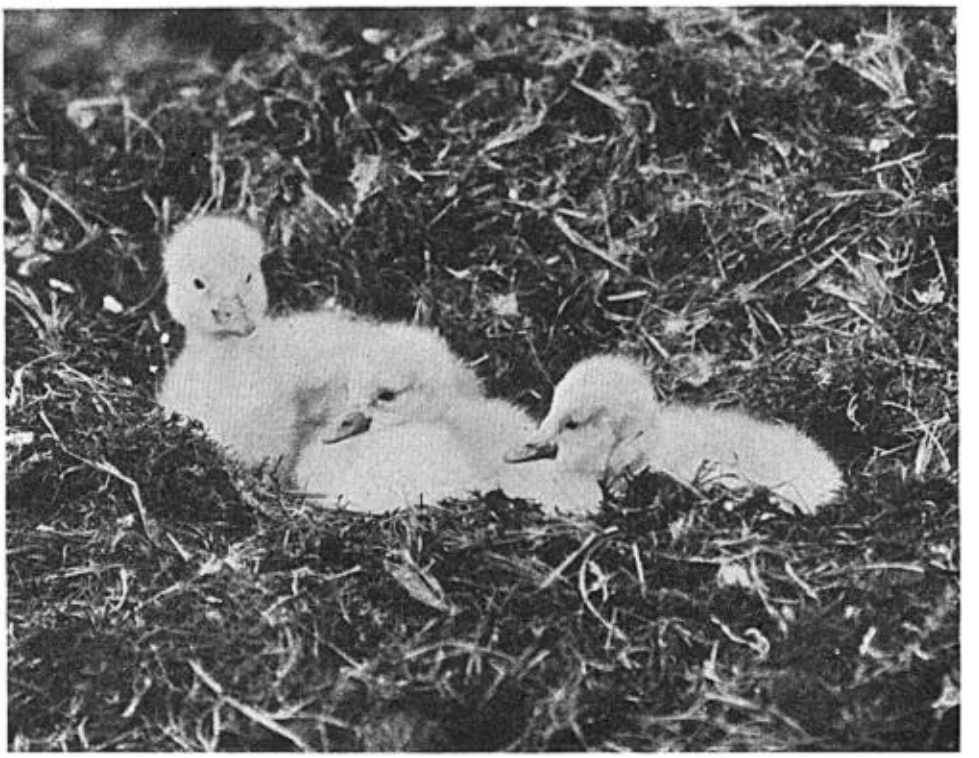

Fig. 57. YOUNG WHISTLING SWANS IN THEIR NEST; MINT RIVER, JULY 12, 1922.

tundra. The swans are probably among the earliest birds to nest in the vicinity of Wales, the geese eggs being but half incubated at this time, while the loon eggs were still fresh.

The Whistling Swans owe their present day numbers to the fact that they nest over a wide stretch of barren country, uninhabited even by natives. They are continually persecuted on their breeding grounds and were it not for their habit of nesting early, when the snow is deep and too soft for traveling, they would have been exterminated long ago.

Denver, Colorado, January 12, 1925.